

Notice of Allowability

Application No.

09/535,810

Examiner

Phuoc H. Nguyen

Applicant(s)

GAI ET AL.

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to an amendment filed on August 9, 2004.
2. ☒ The allowed claim(s) is/are 1-25.
3. ☒ The drawings filed on March 28, 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Sidney Johnston (Registration No. 29,548) on November 22, 2004.

Please replace claim 15 as follow:

15. (new) A method for searching network messages for pre-defined regular expressions in order to apply a selected action to network messages matching a given regular expression, the method comprising the steps of:

storing the pre-defined regular expressions in a content-addressable memory (CAM) having a plurality of entries;

decoding a given network message, or selected portion thereof, for comparison with the regular expressions contained within the CAM;

inputting a decoded portion of the given network message to the CAM for comparison with all of the regular expressions stored therein;

decoding an output returned from the CAM; and

identifying, in response to the decoded output, the action that corresponds to a first CAM entry matching the inputted network message or selected portion thereof, whereby input to the CAM is compared against all CAM entries at the same time, allowing high-speed pattern matching of network messages.

Examiner's Statement of Reasons for Allowance

2. This office action is in response to the amendment filed on August 9, 2004. Previous office action contained claims 1-25. Amendment filed on August 9, 2004 have been entered and made of record.

3. Claims 1-25 are allowed.

4. Claims include limitations that the prior art of record does not appear to teach or render obvious the claimed limitations as recited below.

5. The following is a statement of reasons for the indication of allowable subject matter:

Khanna U.S. Patent 6,591,331 teach a method and apparatus for determining the address of the highest priority matching entry in a segmented content addressable memory device comparing each entry in each of the CAM array block, and encoder encode a match flag signals into a block of address of the highest priority matching location, and the decoder that decodes the block address. However, the prior art of record fails to teach or suggest individually or in combination as stated in claims 1,15,19, and 25, "a decoder circuit coupled to the regular expression storage device, the decoder circuit configured to control an input to the CAM that includes a given network message or selected portion thereof for comparison with the regular expressions contained within the CAM, and to receive and decode an output returned from the regular expression storage device, the output identifying the action to be applied to the given network message or portion thereof," and in combination with other limitations as set forth in the independent claims. Claims 2-14,16-18, and 20-24 are allowed due to dependent claims.

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6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuoc H. Nguyen whose telephone number is 571-272-3919. The examiner can normally be reached on Mon -Thu (7AM-4: 30PM) and off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

November 22, 2004



BUNJOB JAROENCHONWANIT
PRIMARY EXAMINER